Code 923 Biospheric Sciences Branch Highlights
for July – August 2002

**** Dr. Steve Ungar (Code 923) selected for NASA Exceptional Achievement Medal**

Dr. Ungar of the Biospheric Sciences Branch (Code 923) has been selected to receive the NASA Exceptional Achievement Medal. This medal is awarded for a significant, specific accomplishment or contribution clearly characterized by a substantial and significant improvement in operations, efficiency, service, financial savings, science, or technology which contribute to the mission of NASA.

Dr. Stephen G. Ungar has served, with outstanding success as the Mission Scientist for the Earth Observer 1 (EO-1) New Millennium technology demonstration mission, from conception through deployment, and during its approved extended mission. Without his constant advocacy to maintain high scientific standards for the sensors and data systems on this mission, its success would have been jeopardized. This constant advocacy for the NMP EO-1 sensors and data systems resulted in data that far surpassed the expectations of the user community for this technology demonstration mission.

The 2002 NASA Honor Awards ceremony has been postponed until November 19th.

**** DDF-funded project featured as a Top Story on the NASA/GSFC Media web page**

The Baltimore Sun Photometer Network, a DDF funded project being managed by Brent Holben and Elissa Levine of Code 923 was featured as a Top Story on the NASA/GSFC Media web page. Recent results of some of the analyses from the Baltimore Children's asthma project, supported by NASA's Healthy Planet: Earth Science and Public Health Program, are also discussed. Check the Media web page for details.

http://www.gsfc.nasa.gov/topstory/20020614baltasthma.html

**** MODIS Land Team Outreach Workshop on Vegetation Variables held in Missoula, Montana, on July 16, 17, 18, 2002**

Over 140 people from 13 countries attended a user outreach workshop on the MODIS-derived vegetation variables: VI, LAI/FPAR, and NPP.

This workshop provided a comprehensive summary of the status of the MODIS Vegetation variables, now that a complete year, 2001, of data is available and has been analyzed. The MODIS Land Science team and relevant EOS DAACs covered step-by-step details of the processing, distribution, analysis and interpretation of the MODIS Vegetation variables. The workshop also included hands-on computer labs to take a user

through details of data ordering, reprojection, reformatting and other technical issues. Finally, the Team members gave the results of analyzing the 2001 data year, including quality control flags, validation activities, and algorithm limitations. The workshop included open Poster Sessions for any attendee who had used the MODIS Vegetation variables to report on their latest results. This workshop was financially subsidized by NASA to allow maximum participation, particularly by graduate students interested in incorporating MODIS Vegetation data in their research.

NASA GSFC made several contributions to the workshop: Robert Wolfe (922) presented the work on processing, geolocation and calibration and Jeff Morisette (920) chaired the session on validation which included Jeff Privette's (923) material on "Southern Africa Validation of EOS".

**** EO-1 images and associated article appear in IEEE Geoscience and Remote Sensing journal**

Pan-sharpened images of the La Plata, MD tornado scar provided by Earth Observing One (EO-1) appear on the June 2002 cover of the IEEE Geoscience and Remote Sensing journal. True-color, panchromatic-sharpened multispectral images acquired on April 24 and May 1 by the Advanced Land Imager (ALI) aboard the EO-1 satellite show the path of destruction of the tornado.

The journal also contains the feature article by Stephen Ungar (Code 923), "Overview of the Earth Observing One (EO-1) Mission" which details the mission as well as applications throughout the world.

**** EOS Core Site link to over 1000 EOS data sets**

The EOS Land Validation Core Site WWW pages reached the 1000 link milestone in August 2002, where each link points to a unique satellite data set. The EOS Land Validation Core Site system was initiated by the MODIS Land Validation Team to coincide with the launch of Terra. One of the primary goals of Goddard and the MODIS Land Team's efforts in support of the EOS Land Validation Core Sites is to provide easy access to EOS data for research sites around the world.

Currently, free ftp access is available for Core Site data sets. These data include ETM+, ASTER, and 200 x 200 km subsets of MODIS and SeaWiFS data. Many of the Core Sites are already part of existing science data networks, such as the FLUXNET network (http://daacl.esd.ornl.gov/FLUXNET/), AERONET (http://aeronet.gsfc.nasa.gov:8080/), and Long Term Ecological Research site network (LTER: http://www.lternet.edu). High resolution IKONOS data are also available for the Core Sites (NASA Scientific Data Purchase program registration required). The Core Site system continues to serve validation and other science research with its expanding data archive.

For more information and data access see:
http://modisland.gsfc.nasa.gov/val/coresite_gen.asp

**** Presentation by Bounoua (Code 923) to National Center for Atmospheric Research (NCAR)**

Marc Imhoff and Lahouari Bounoua were invited to NCAR last week to participate in an effort to better understand how urban development interacts with the troposphere at local and regional scales. Lahouari spoke on how the Simple Biosphere Model (SiB) could be used to simulate the effect of aerosols, ozone, and changes in temperature and rainfall on photosynthetic production and how diminished or enhanced productivity on the landscape could feed back to local scale variations in climate.

Dr. Bounoua's ideas were well received by the NCAR and University Corporation for Atmospheric Research (UCAR) participants and many expressed interest in collaborating with Imhoff and Bounoua on future proposals.

**** Levine participates in design of Soils exhibit at the Smithsonian**

Dr. Elissa Levine (Code 923) participated in a planning and brainstorming meeting for designing an exhibit on Soils at the Smithsonian Institution's Natural History Museum. The Soils exhibit will be a part of the NASA funded Global Links exhibit recently opened at the Smithsonian, and may eventually stay at the museum on a permanent basis, as well as have a travelling version for museums in other cities. The purpose of the exhibit is to teach the general public the importance of Soils as a precious natural resource that is now in a critical state globally. A campaign for fund raising is now underway to provide sufficient support for this project.